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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,967	02/02/2006	Gerhard Wolf	285132US0PCT	9432
22850	7590	05/11/2011	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			AHVAZI, BIJAN	
			ART UNIT	PAPER NUMBER
			1761	
			NOTIFICATION DATE	DELIVERY MODE
			05/11/2011	ELECTRONIC

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/566,967
Filing Date: February 02, 2006
Appellant(s): WOLF ET AL.

Vincent K. Shier
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/25/2011 appealing from the Office action mailed 09/29/2010.

Art Unit: 1761

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 13-15, 17-29 are pending. Claims 13-14, 18, 20, 22, 24, 26 are under examination on the merits. Claims 15, 17, 19, 21, 23, 25, 27-29 are withdrawn to a non-elected invention from further consideration.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

Art Unit: 1761

REJECTIONS.” New grounds of rejection (if any) are provided under the subheading “NEW GROUNDS OF REJECTION.”

NEW GROUND(S) OF REJECTION

1. Claims 13-14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) and Topfl *et al.* (Pat. No. US 3,991,238).
2. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707), and Topfl *et al.* (Pat. No. US 3,991,238) as applied to claim 13 above, and further in view of Buckman *et al.* (Pat. No. US 4,054,542).
3. Claims 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707) and Topfl *et al.* (Pat. No. US 3,991,238) as applied to claim 13 above, and further in view of Ohno *et al.* (Pat. No. US 6,809,147 B1).
4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707) and Topfl *et al.* (Pat. No. US 3,991,238) as applied to claim 13 above, and further in view of Natoli *et al.* (Pat. No. US 5,709,714).

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

Art Unit: 1761

(8) Evidence Relied Upon

4775385	SCHMIDT ET AL.	10-1988
5676707	KUWABARA ET AL.	10-1997
WO2001/25386	PARKER	04-2001
3991238	TOPFL	11-1976

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

1. Claims 13-14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707), and Andrew Philip Parker (WO 2001/25386).

Regarding claims 13-14 and 24, Schmidt *et al.* teach a process for dyeing leathers, comprising treating the leather with a polyamide-amine (water-soluble cationic polymers) (Col. 6, line 50-52) , follow by addition of anionic leather treatment composition (Col. 8, lines 18-30) in a rotating tanning drum as a uniform rate (Col. 8, line 25), wherein after tumbling, 7% of commercially available fat-liquoring mixture is added as shown in Example 6 (Col. 8, lines 25-27). Thereafter the dyed leather is dried in air, was mechanically finished (Col. 8, lines 30-31).

Schmidt *et al.* **do not** expressly teach **(1)** applying the composition to leather by roll coating and/or roll application and/or spray application and **(2)** wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is an epichlorohydrinamine polymer, the polymer having a weight average molar mass of from $1 \cdot 10^2$ to $2 \cdot 10^5$ g/mol, wherein the concentration of the polymer in water ranges from 5 to 50% by weight based on water.

Art Unit: 1761

Referring to (1), however, Kuwabara *et al.* teach applying water-soluble resin materials onto the leather by various methods such as a method in which any of the materials formed into an aqueous solution is sprayed by means of a spray gun, coated by means of a bar coater, a roll coater an applicator, a doctor blade or the like, or applied by screen printing, and a method in which any of the materials formed into a film is contact bonded (Col. 5, lines 54-61).

Furthermore, Schmidt *et al.* and Kuwabara *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* so as to include applying the composition materials onto the leather by various methods as taught by Kuwabara *et al.*, and would have been motivated to do so with reasonable expectation that would result in providing decrease in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration as taught by Kuwabara *et al.* (Co. 1, lines 30-37)

Referring to (2), neither Schmidt *et al.* and Kuwabara *et al.* teach the cationic or amphoteric aqueous treatment composition used in process step (a) is an epichlorohydrinamine polymer, the polymer having a weight average molar mass of from $1 \cdot 10^2$ to $2 \cdot 10^5$ g/mol, wherein the concentration of the polymer in water ranges from 5 to 50% by weight based on water.

Art Unit: 1761

However, Parker teaches a method of treating fabric comprising applying to the fabric a fabric care composition (Page 1, lines 7-9), wherein the reactive cationic polymer is an amine- or amide-epichlorohydrin resin or derivative thereof (Page 5, lines 13-14). Preferably these cationic polymers have a weight average mean molecular weight of from 300 to 1,000,000 Dalton (Page 5, lines 15-16). The preferred epichlorohydrin resins are sometimes referred to as amine-epichlorohydrin resins and polyamine-epichlorohydrin (PAE) resins (the two terms being used synonymously) although these terms encompass both the amine and amide resins and their derivatives (Page 5, lines 18-23). The resins can also have a mixture of amine and amide groups (Page 5, lines 23-24). The reactive anionic polymer is present in the composition in an amount such that the overall negative charge contributed by the anionic groups of the anionic polymer is less than the positive charge provided by the cationic groups of the cationic polymer (such as the amine-epichlorohydrin resin) and any cationic groups in the anionic polymer (Page 7, lines 23-26), wherein suitable amounts of reactive anionic polymer in the composition are in the range of from 0.01% to 35% by weight, preferably 0.1% to 13.5% by weight (Page 7, lines 28-30).

Furthermore, Schmidt *et al.* and Parker are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Parker, and would have been motivated to do so with reasonable expectation that would result in manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents as taught by Parker (Page 6, lines 6-11 & Page 10, lines 30-31- Page 11, line 1).

Art Unit: 1761

2. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707), and Andrew Philip Parker (WO 2001/25386) as applied to claim 13 above, and further in view of Buckman *et al.* (Pat. No. US 4,054,542).

Regarding claim 22, The disclosure of Schmidt *et al.*, Kuwabara *et al.* and Parker are adequately set forth in paragraph 1 above and is incorporated herein by reference. In particular, Parker teach the amine- or amide-epichlorohydrin resins may have one or more functional groups capable of forming azetidinium groups and/or one or more azetidinium functional groups (Page 5, lines 26-28) or Alternatively, or additionally, the resins may have one or more functional groups that contain epoxide groups or derivatives thereof e.g. KymeneTM 450 (ex Hercules) (Page 6, lines 2-4). Schmidt *et al.* and Kuwabara *et al.*, and Parker **do not** expressly teach wherein the epichlorohydrinamine polymer in the treatment composition in process step (a) has at least two general structural unit (I) and (II) as set forth.

However, Buckman *et al.* teach cationic, water-soluble, amine-epichlorohydrin polymer compositions and to the uses of these polymers in the pulp and paper industry to improve drainage, provide retention of fiber fines, dyes, pigments, fillers, starch, and gum and increase strength. In addition, said polymers are useful as resins in the manufacture of electroconductive paper and the sizing of paper and paperboard as well as the separation of minerals in ore processing operations (Col. 1, lines 7-12), wherein the reaction products involving polymeric precursor and mono-tertiary amines may be as low as 500 whereas the polymers made with di-tertiary amines may have molecular weights as high as 50,000 to 500,000 (Col. 5, lines 42-46). Buckman *et al.* teach the primary amines which have been found to be satisfactory for the reaction with epichlorohydrin to form the polymeric precursor include aliphatic, alicyclic, and

Art Unit: 1761

alkylaromatic amines which may be substituted by hydroxyl or chloro groups or contain carbon to carbon double bonds. The aliphatic groups in these amines may be straight or branched chains (Col. 4, lines 38-44). Examples of these amines are given such as isopropylamine (Col. 4, lines 56-63).

Furthermore, Schmidt *et al.* and Buckman *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Parker or Buckman *et al.* and would have been motivated to do so with reasonable expectation that would result in manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents and further to provide novel cationic water-soluble, amine-epichlorohydrin polymers as compare to polyethylenimines which requires the use of the very toxic monomer ethylenimine which, in recent years, has been described as a carcinogen, and severe restrictions have been placed on the handling of the monomer in commercial and industrial plants by government regulatory agencies as taught by Parker (Page 6, lines 6-11 & Page 10, lines 30-31- Page 11, line 1) or Buckman *et al.* (Col. 1, lines 40-46).

It is held to be a ***prima facie*** case of obviousness since a person of ordinary skill in the art would have recognized the interchangeability of the element (i.e. functional group) shown in the prior art as taught by Buckman *et al.* (Col. 4, line 56-63) for the corresponding element disclosed in the specification wherein the side chains syntheses merely done by routine experimentation.

Art Unit: 1761

3. Claims 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707) and Andrew Philip Parker (WO 2001/25386) as applied to claim 13 above, and further in view of Ohno *et al.* (Pat. No. US 6,809,147 B1).

Regarding claims 18, 20, The disclosure of Schmidt *et al.*, Kuwabara *et al.* and Parker are adequately set forth in paragraph 1 above and is incorporated herein by reference. Schmidt *et al.*, Kuwabara *et al.* and Parker **do not** expressly teach wherein the cationic or amphoteric aqueous treatment composition used in process step (a), the ratio of amine units (comprise from 0.5 to 0.8 part of dimethylaminopropylamine and from 0.2 to 0.5 part of benzylamine) to epichlorohydrin units being from 0.8:1.2 to 1.2:0.8.

However, Ohno *et al.* teach polyamine modified compound, including: reaction products of the following (a)-(c): a) aliphatic polyamine (Col. 4, lines 62-64) such as dimethylamino propylamine (Col. 4, line 64), b) a cyclic amine or aromatic polyamine which has at least one NH₂ or NH group (Col. 5, lines 2-4) such as benzylamine (Col. 5, line 11) and reaction products of said aliphatic polyamine (a), said amine (b) and epoxide compound (d) which includes glycidyl ether obtained by reaction of epichlorohydrin with polyhydric phenol (Col. 5, lines 25-28) wherein (a)=1 mole; (b)=0.5-5 moles; and (NH₂ and/or NH contained in (a) and (b))/(epoxy group contained in (d)) is equal to 1/0.3-0.9 (Col. 5, lines 50-52).

Furthermore, Schmidt *et al.* and Ohno *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* and

Art Unit: 1761

epichlorohydrinamine polymer by Parker so as to include the ratio of amine units (comprise from 0.5 to 0.8 part of dimethylaminopropylamine and from 0.2 to 0.5 part of benzylamine) to epichlorohydrin units being from 0.8:1.2 to 1.2:0.8 as taught by Ohno *et al. et al.* and would have been motivated to do so with reasonable expectation that would result in manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross linking reagents, since the reaction between the amines and monoepoxides is usually effected merely by brining the components together in proper proportions as taught by Ohno *et al.* (Col. 5, lines 50-52).

It is held that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707) and Andrew Philip Parker (WO 2001/25386) as applied to claim 13 above, and further in view of Natoli *et al.* (Pat. No. US 5,709,714).

Regarding claim 26, The disclosure of Schmidt *et al.*, Kuwabara *et al.* and Parker are adequately set forth in paragraph 1 above and is incorporated herein by reference. Schmidt *et al.* and Kuwabara *et al.* and Parker **do not** expressly teach wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is applied only to the crust surface of the leather.

Art Unit: 1761

However, Natoli *et al.* teach a method of treating a tanned leather stock (Col. 15, line 58) wherein retanning said tanned leather stock with particles of an amphoteric polymer dispersed in an aqueous medium to produce a retanned leather stock having improved color expression characteristic (Col. 15, lines 59-62). After retanning or, if desired, during retanning, the hide is colored with colorants, such as, acid dyes, mordant dyes, direct dyes, metalized dyes, soluble sulfur dyes, and cationic dyes, wherein the colorants include natural pigments and synthetic dyes that are used to achieve the required color in both the cross section and the surface of crust leather before the finishing step (Col. 2, lines 22-32).

Furthermore, Schmidt *et al.* and Natoli *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* and epichlorohydrinamine polymer by Parker so as to include the required color in both the cross section and the surface of crust leather before the finishing step as taught by Natoli *et al.* and would have been motivated to do so with reasonable expectation that would result in producing a retanned leather stock having improved color expression characteristic as taught by Natoli *et al.* (Col. 1, lines 60-64).

NEW GROUND(S) OF REJECTION

1. Claims 13-14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) and Topfl *et al.* (Pat. No. US 3,991,238).

Art Unit: 1761

Regarding claims 13-14 and 24, Schmidt *et al.* teach a process for dyeing leathers, comprising treating the leather with a polyamide-amine (water-soluble cationic polymers) (Col. 6, line 50-52), follow by addition of anionic leather treatment composition (Col. 8, lines 18-30) in a rotating tanning drum as a uniform rate (Col. 8, line 25), wherein after tumbling, 7% of commercially available fat-liquoring mixture is added as shown in Example 6 (Col. 8, lines 25-27). Thereafter the dyed leather is dried in air, was mechanically finished (Col. 8, lines 30-31).

Schmidt *et al.* **do not** expressly teach **(1)** applying the composition to leather by roll coating and/or roll application and/or spray application and **(2)** the cationic or amphoteric aqueous treatment composition used in process step (a) is an epichlorohydrinamine polymer, the polymer having a weight average molar mass of from $1 \cdot 10^2$ to $2 \cdot 10^5$ g/mol, wherein the concentration of the polymer in water ranges from 5 to 50% by weight based on water.

Referring to (1), however, Kuwabara *et al.* teach applying water-soluble resin materials onto the leather by various methods such as a method in which any of the materials formed into an aqueous solution is sprayed by means of a spray gun, coated by means of a bar coater, a roll coater an applicator, a doctor blade or the like, or applied by screen printing, and a method in which any of the materials formed into a film is contact bonded (Col. 5, lines 54-61) with the benefit of exhibiting decrease in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration (Co. 1, lines 30-37) **[motivation]**.

Furthermore, Schmidt *et al.* and Kuwabara *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the

Art Unit: 1761

light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* so as to include applying the composition materials onto the leather by various methods as taught by Kuwabara *et al.*, and would have been motivated to do so with reasonable expectation that would result in providing decrease in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration as taught by Kuwabara *et al.* (Co. 1, lines 30-37)

Referring to (2). Neither Schmidt *et al.* and Kuwabara *et al.* teach the cationic or amphoteric aqueous treatment composition used in process step (a) is an epichlorohydrinamine polymer, the polymer having a weight average molar mass of from $1 \cdot 10^2$ to $2 \cdot 10^5$ g/mol, wherein the concentration of the polymer in water ranges from 5 to 50% by weight based on water.

However, Topfl *et al.* teaches method of process for dressing and providing leather with antimicrobial finish (Col. 1, lines 5-6), wherein a process comprises treating the leather with preparations of reaction products in which the component (a) is a reaction product of epichlorohydrin and 2,2-bis-(4'-hydroxyphenyl)-propane (Col. 1, lines 43-62, Col. 3, lines 5-7) having a weight average molecular mass of from 100 to 200000 g/mol, wherein the concentration of the polymer in water ranges from 5 to 50% (Col. 5, lines 46-61) as shown in Example 1 with the benefit of exhibiting leather finished with these dressing agents have very

Art Unit: 1761

good general fastness properties, in particular very good fastness to light, wet treatments and dry rubbing; it is also fast to ironing and creasing (Col. 5, lines 28-34) **[motivation]**.

Furthermore, Schmidt *et al.*, Kuwabara *et al.*, and Topfl *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Topfl *et al.*, and would have been motivated to do so with reasonable expectation that would result in leather finished with these dressing agents have very good general fastness properties, in particular very good fastness to light, wet treatments and dry rubbing; it is also fast to ironing and creasing as taught by Topfl *et al.* (Col. 5, lines 28-34).

2. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707), and Topfl *et al.* (Pat. No. US 3,991,238) as applied to claim 13 above, and further in view of Buckman *et al.* (Pat. No. US 4,054,542).

Regarding claim 22, The disclosure of Schmidt *et al.* and Kuwabara *et al.* and Topfl *et al.* is adequately set forth in paragraph 1 above and is incorporated herein by reference. Schmidt *et al.* and Kuwabara *et al.*, and Topfl *et al.* **do not** expressly teach the epichlorohydrin amine polymer in the treatment composition in process step (a) has at least two general structural unit (I) and (II) as set forth.

Art Unit: 1761

However, Buckman *et al.* teach cationic, water-soluble, amine-epichlorohydrin polymer compositions and to the uses of these polymers in the pulp and paper industry to improve drainage, provide retention of fiber fines, dyes, pigments, fillers, starch, and gum and increase strength. In addition, said polymers are useful as resins in the manufacture of electroconductive paper and the sizing of paper and paperboard as well as the separation of minerals in ore processing operations (Col. 1, lines 7-12), wherein the reaction products involving polymeric precursor and mono-tertiary amines may be as low as 500 whereas the polymers made with di-tertiary amines may have molecular weights as high as 50,000 to 500,000 (Col. 5, lines 42-46). Buckman *et al.* teach the primary amines which have been found to be satisfactory for the reaction with epichlorohydrin to form the polymeric precursor include aliphatic, alicyclic, and alkylaromatic amines which may be substituted by hydroxyl or chloro groups or contain carbon to carbon double bonds. The aliphatic groups in these amines may be straight or branched chains (Col. 4, lines 38-44). Examples of these amines are given such as isopropylamine (Col. 4, line 56-63) with the benefit of exhibiting to manufacture various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents and further to provide novel cationic water-soluble, amine-epichlorohydrin polymers as compare to polyethylenimines which requires the use of the very toxic monomer ethylenimine which, in recent years, has been described as a carcinogen, and severe restrictions have been placed on the handling of the monomer in commercial and industrial plants by government regulatory agencies (Col. 1, lines 40-46) **[motivation]**.

Furthermore, Schmidt *et al.*, and Buckman *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit, at the time of the invention, it would have been obvious to a person of

Art Unit: 1761

ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Buckman *et al.* and would have been motivated to do so with reasonable expectation that would result in manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents and further to provide novel cationic water-soluble, amine-epichlorohydrin polymers as compare to polyethylenimines which requires the use of the very toxic monomer ethylenimine which, in recent years, has been described as a carcinogen, and severe restrictions have been placed on the handling of the monomer in commercial and industrial plants by government regulatory agencies as taught Buckman *et al.* (Col. 1, lines 40-46).

It is held to be a ***prima facie*** case of obviousness since a person of ordinary skill in the art would have recognized the interchangeability of the element (i.e. functional group) shown in the prior art as taught by Buckman *et al.* (Col. 4, line 56-63) for the corresponding element disclosed in the specification wherein the side chains syntheses merely done by routine experimentation.

3. Claims 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707) and Topfl *et al.* (Pat. No. US 3,991,238) as applied to claim 13 above, and further in view of Ohno *et al.* (Pat. No. US 6,809,147 B1).

Regarding claims 18, 20, The disclosure of Schmidt *et al.*, Kuwabara *et al.* and Topfl *et al.* is adequately set forth in paragraph 1 above and is incorporated herein by reference. Schmidt *et al.*, Kuwabara *et al.* and Topfl *et al.* **do not** expressly teach the cationic or

Art Unit: 1761

amphoteric aqueous treatment composition used in process step (a), the ratio of amine units (comprise from 0.5 to 0.8 part of dimethylaminopropylamine and from 0.2 to 0.5 part of benzylamine) to epichlorohydrin units being from 0.8:1.2 to 1.2:0.8.

However, Ohno *et al.* teach polyamine modified compound, including: reaction products of the following (a)-(c): a) aliphatic polyamine (Col. 4, lines 62-64) such as dimethylamino propylamine (Col. 4, line 64), b) a cyclic amine or aromatic polyamine which has at least one NH_2 or NH group (Col. 5, lines 2-4) such as benzylamine (Col. 5, line 11) and reaction products of said aliphatic polyamine (a), said amine (b) and epoxide compound (d) which includes glycidyl ether obtained by reaction of epichlorohydrin with polyhydric phenol (Col. 5, lines 25-28) wherein (a)=1 mole; (b)=0.5-5 moles; and (NH_2 and/or NH contained in (a) and (b))/(epoxy group contained in (d)) is equal to 1/0.3-0.9 (Col. 5, lines 50-52) with benefit of exhibiting to manufacture various molecular weight ranges polymer by the selection of different catalysts and the use of cross linking reagents, since the reaction between the amines and monoepoxides is usually effected merely by brining the components together in proper proportions (Col. 5, lines 50-52) **[motivation]**.

Furthermore, Schmidt *et al.*, and Ohno *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* and epichlorohydrinamine polymer by Topfl *et al.*, so as to include the ratio of amine units (comprise from 0.5 to 0.8 part of dimethylaminopropylamine and from 0.2 to 0.5 part of benzylamine) to epichlorohydrin units being from 0.8:1.2 to 1.2:0.8 as taught by Ohno *et al. et al.* and would have been motivated to do so with reasonable expectation that would result in

Art Unit: 1761

manufacturing various molecular weight ranges polymer by the selection of different catalysts and the use of cross linking reagents, since the reaction between the amines and monoepoxides is usually effected merely by brining the components together in proper proportions as taught by Ohno *et al.* (Col. 5, lines 50-52).

It is held that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385), Kuwabara *et al.* (Pat. No. US 5,676,707) and Topfl *et al.* (Pat. No. US 3,991,238) as applied to claim 13 above, and further in view of Natoli *et al.* (Pat. No. US 5,709,714).

Regarding claim 26, The disclosure of Schmidt *et al.*, Kuwabara *et al.* and Topfl *et al.* is adequately set forth in paragraph 1 above and is incorporated herein by reference. Schmidt *et al.*, Kuwabara *et al.* and Topfl *et al.* **do not** expressly teach wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is applied only to the crust surface of the leather.

However, Natoli *et al.* teach a method of treating a tanned leather stock (Col. 15, line 58) wherein retanning said tanned leather stock with particles of an amphoteric polymer dispersed in an aqueous medium to produce a retanned leather stock having improved color expression characteristic (Col. 15, lines 59-62). After retanning or, if desired, during retanning, the hide is colored with colorants, such as, acid dyes, mordant dyes, direct dyes, metalized dyes, soluble

Art Unit: 1761

sulfur dyes, and cationic dyes, wherein the colorants include natural pigments and synthetic dyes that are used to achieve the required color in both the cross section and the surface of crust leather before the finishing step (Col. 2, lines 22-32) **[motivation]**.

Furthermore, Schmidt *et al.*, and Natoli *et al.* are analogous art because they are from the same field of endeavor, namely that of the process for the treatment of leather. In the light of such benefit at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* and epichlorohydrinamine polymer by Topfl *et al.*, so as to include the required color in both the cross section and the surface of crust leather before the finishing step as taught by Natoli *et al.* and would have been motivated to do so with reasonable expectation that would result in producing a retanned leather stock having improved color expression characteristic as taught by Natoli *et al.* (Col. 1, lines 60-64).

(10) Response to Argument

With respect to the rejection of the instant claims under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707), and Andrew Philip Parker (WO 2001/25386), Appellant states that Schmidt *et al.* do not disclose the process according to presently pending Claim 13, because the feature that at least one cationic or amphoteric aqueous treatment composition is applied to leather by roll coating and/or roll application and/or spray application is missing in Schmidt *et al.* In addition, step (b) of the process according to claim 13, treating the leather with an anionic leather treatment composition in a drum, is missing, too.

Art Unit: 1761

In response to Appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is noted the prior art references that the Examiner relied upon as a basis for rejection of the claimed invention are in the field of applicant's endeavor, wherein the Examiner maintains that Schmidt *et al.* teach a process for dyeing leathers, comprising treating the leather with a polyamide-amine (water-soluble cationic polymers) (Col. 6, line 50-52), follow by addition of anionic leather treatment composition (Col. 8, lines 18-30) in a rotating tanning drum as a uniform rate (Col. 8, line 25), wherein after tumbling, 7% of commercially available fat-liquoring mixture is added as shown in Example 6 (Col. 8, lines 25-27). Thereafter the dyed leather is dried in air, was mechanically finished (Col. 8, lines 30-31).

Schmidt *et al.* **do not** expressly teach **(1)** applying the composition to leather by roll coating and/or roll application and/or spray application and **(2)** wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is an epichlorohydrinamine polymer, the polymer having a weight average molar mass of from $1 \cdot 10^2$ to $2 \cdot 10^5$ g/mol, wherein the concentration of the polymer in water ranges from 5 to 50% by weight based on water.

Referring to (1), however, Kuwabara *et al.* teach applying water-soluble resin materials onto the leather by various methods such as a method in which any of the materials formed into an aqueous solution is sprayed by means of a spray gun, coated by means of a bar coater, a roll coater an applicator, a doctor blade or the like, or applied by screen printing, and a method

Art Unit: 1761

in which any of the materials formed into a film is contact bonded (Col. 5, lines 54-61) with the benefit of exhibit decreasing in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration as taught by Kuwabara *et al.* (Co. 1, lines 30-37) **[motivation]**.

It is noted that the method of applying a composition to the leather is within the level of ordinary skill in the art. (MPEP § 2144.06) and further in response to applicant's argument that the references such as Kuwabara *et al.* treatment is different is different and fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. applying different composition such as polyvinylpyrrolidone and water) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993)

Referring to (2), Parker teaches a method of treating fabric comprising applying to the fabric a fabric care composition (Page 1, lines 7-9), wherein the reactive cationic polymer is an amine- or amide-epichlorohydrin resin or derivative thereof (Page 5, lines 13-14). Preferably these cationic polymers have a weight average mean molecular weight of from 300 to 1,000,000 Dalton (Page 5, lines 15-16). The preferred epichlorohydrin resins are sometimes referred to as amine-epichlorohydrin resins and polyamine-epichlorohydrin (PAE) resins (the two terms being used synonymously) although these terms encompass both the amine and amide resins and their derivatives (Page 5, lines 18-23). The resins can also have a mixture of amine and amide

Art Unit: 1761

groups (Page 5, lines 23-24). The reactive anionic polymer is present in the composition in an amount such that the overall negative charge contributed by the anionic groups of the anionic polymer is less than the positive charge provided by the cationic groups of the cationic polymer (such as the amine-epichlorohydrin resin) and any cationic groups in the anionic polymer (Page 7, lines 23-26), wherein suitable amounts of reactive anionic polymer in the composition are in the range of from 0.01% to 35% by weight, preferably 0.1% to 13.5% by weight (Page 7, lines 28-30) with the benefit of exhibit improved surface color definition of the fabric following washing and/or improved dimensional stability of the fabric and/or reduced fabric fibrillation as taught by Parker (Col. 9, lines 56-61) **[motivation]**.

In the light of such benefit, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* so as to include epichlorohydrinamine polymer as taught by Parker, and would have been motivated to do so with reasonable expectation that would result in improved surface color definition of the fabric following washing and/or improved dimensional stability of the fabric and/or reduced fabric fibrillation as taught by Parker (Col. 9, lines 56-61).

In response to Appellant's arguments that Parker is considerably different from the technical field of leather treatment compositions and processes for the treatment of leather according to the present application.

The Examiner respectfully disagrees. Parker is directed to the treatment of textiles with an amine-epichlorohydrin resin composition and the subsequent dyeing of the textiles with commercially available dyes. Appellant contemplates the treatment of leather with an amine-epichlorohydrin resin and the subsequent dyeing of the material with commercially available

Art Unit: 1761

dyes. Additionally, Parker also teaches the treatment of textiles with amphoteric surfactants as part of the conditioning process (Col. 8, lines 12-21). The treatment of leather with cationic or amphoteric materials and the subsequent dyeing of the materials as taught in the prior art or record encompasses the materials contemplated by appellant and the use of the materials in the manner as contemplated by appellant.

The deficiencies of the recited depended claims are compensated with either by Buckman *et al.* which teach the epichlorohydrinamine polymer in the treatment composition in process step (a) has at least two general structural unit (I) and (II) as set forth, or Ohno *et al.* which teach the cationic or amphoteric aqueous treatment composition used in process step (a), the ratio of amine units (comprise from 0.5 to 0.8 part of dimethylaminopropylamine and from 0.2 to 0.5 part of benzylamine) to epichlorohydrin units being from 0.8:1.2 to 1.2:0.8 or Natoli *et al.* teach wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is applied only to the crust surface of the leather.

Note that Appellant has not provided any declaration under 37 CFR 1.132 during the prosecution to overcome the rejection based upon reference applied under 35 U.S.C. 103 (a) as set forth in Office action dated 09/29/2010 to compare their invention product and show the product is actually different from and unexpectedly better than the teachings of the combination of the recited references

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Art Unit: 1761

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte dismissal of the appeal* as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/BA/
Bijan Ahvazi
Examiner Art Unit 1761

Art Unit: 1761

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

Conferees:

/Harold Y Pyon/

Supervisory Patent Examiner, Art Unit 1761

/ROBERT J. WARDEN, Sr./

Supervisory Patent Examiner, Art Unit 1700